

*IF-WS***IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Examiner: D. N. Richards

Dung-Ching Perng

Serial No. 10/824,754

Art Unit: 2815

Filed: April 15, 2004

Title: METHODS OF PORE SEALING AND METAL ENCAPSULATION IN
POROUS LOW K INTERCONNECT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. §§1.97-1.98**

Dear Examiner:

In accordance with the duty of disclosure under 37 C.F.R. §1.56 and pursuant to 37 C.F.R. §§1.97-1.98, Applicant hereby notifies the U.S. Patent and Trademark Office of the references listed on the attached Form PTO-1449. Copies of the documents were previously submitted in an Information Disclosure Statement and/or Office Action, directed to the related application Serial Number 10/439,415, filed May 15, 2003. Accordingly, copies are not included herewith. This protocol conforms with 37 C.F.R. §1.98(d) and M.P.E.P. 609(A)(2). The Examiner is requested to make these documents of record in the application.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant reserves the right to dispute the listed documents as prior art during examination. Furthermore, Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application. The submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other material information may exist.

01/03/2005 YPOLITE1 00000013 071850 10824754

01 FC:1806 180.00 DA

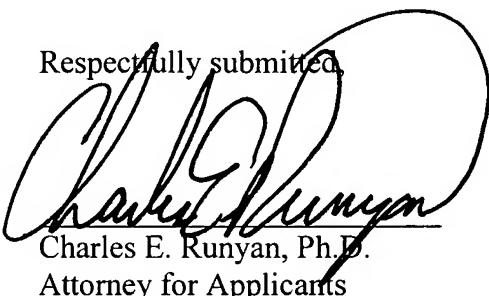
The Examiner is requested to initial the enclosed Form PTO-1449 and return a copy thereof to the undersigned.

The present Information Disclosure Statement is being submitted after receiving the first office action but before an action closing prosecution on the merits. Accordingly, please charge Deposit Account No. **07-1850** in the amount of \$180 as specified in 37 CFR §1.97(c) and 37 CFR §1.17(p).

Date: December 23, 2004

SQUIRE, SANDERS & DEMPSEY L.L.P.
One Maritime Plaza, Suite 300
San Francisco, CA 94111
Telephone (415) 954-0200
Facsimile (415) 393-9887

Respectfully submitted,



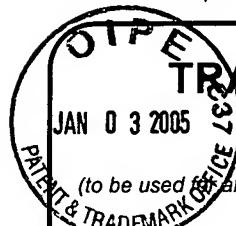
Charles E. Runyan, Ph.D.
Attorney for Applicants
Reg. No. 43,066

Please type a plus sign (+) inside this box →

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.


**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission
(excluding references)

6

Application Number	10/824,754
Filing Date	April 15, 2004
First Named Inventor	Dung-Ching Perng
Group Art Unit	2815
Examiner Name	D. N. Richards

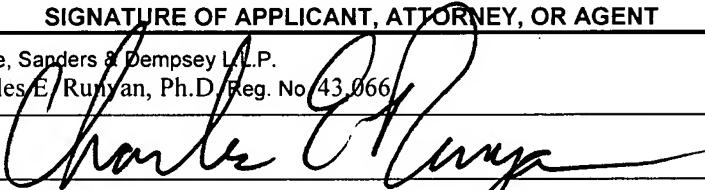
Attorney Docket Number 45271.00015

ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Deposit Account 07-1850 Authorization <input checked="" type="checkbox"/> Postage Paid Return Postcard <input type="checkbox"/> Amendment / Response <input type="checkbox"/> Amendment Transmittal Letter (in duplicate) <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Petition for Extension of Time (_____ months) (in duplicate) <input checked="" type="checkbox"/> Information Disclosure Statement (in duplicate) with Form PTO-1449 citing 16 References <input type="checkbox"/> Express Mail Label No. <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) In/Formal ____ Sheets with Submission of Drawings Transmittal <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input checked="" type="checkbox"/> Transmittal form <input type="checkbox"/> Other Enclosure(s) (please identify below):
---	---	--

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Squire, Sanders & Dempsey LLP. Charles E. Runyan, Ph.D. Reg. No. 43,066
Signature	
Date	December 23, 2004

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this date: December 24, 2004

Typed or printed name	Vera Breder
Signature	
Date	December 24, 2004

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

JAN 03 2005

Docket No.

45271.00015

Application No.

10/824,754

Applicant

Dung-Ching Perng

Filing Date

April 15, 2004

Group Art Unit

2812

O I P E
INFORMATION DISCLOSURE CITATION

in an Application

(Use several sheets if necessary)

JAN 03 2005

U.S. PATENT DOCUMENTS

Examiner Initial	Ref. No.	Document Number	Date of Patent	Name	Class	Subclass	Filing Date if Appropriate
	A1	5,874,355	2/23/99	Huang et al.			
	A2	5,969,422	10/19/99	Ting et al.			
	A3	6,217,721	4/17/01	Xu et al.			
	A4	6,294,836	9/25/01	Paranjpe et al.			
	A5	6,362,099	3/16/02	Gandikota et al.			
	A6	6,444,567	9/3/02	Besser et al.			
	A7	6,455,424	9/24/02	McTeer et al.			
	A8	6,468,906	10/22/02	Chan et al.			
	A9	6,495,200	12/17/02	Chan et al.			
	A10	6,635,964	10/21/03	Maex et al.			
	A11	6,664,187	12/16/03	Ngo et al.			
	A12	6,703,307	3/9/04	Lopatin et al.			

U.S. PATENT APPLICATION PUBLICATION DOCUMENTS

Examiner Initial	Ref. No.	Document Number	Date of Publication	Name	Class	Subclass	Filing Date if Appropriate
	A13	2002/0187632	12/12/02	Marsh			
	A14	2003/0203617	10/30/03	Lane et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initial	Ref. No.	Document Number	Date of Publication	Country	Class	Subclass	Translation	
							Yes	No
	B1							
	B2							
	B3							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages etc.)

C1	Itabashi Takeyuki et al., <i>Electroless Deposited CoWB for Copper Diffusion Barrier Metal</i> , 2002 International Interconnect Technology Conference, pp. 285-287.
C2	Zylberman et al., <i>Comparative Study of Electroless Co(W,P) and Co(Mo,P) Thin-Films for Capping and Barrier Layers for Cu Metallization</i> , 2002 Advanced Metallization Conference, 2 pgs.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if references considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to applicant.